



Fig. 1. Acute eczema in the wrist after contact with wooden bracelet.

they are strong, hard, and resistant to moisture.

They frequently cause allergic contact dermatitis (1), usually in an occupational context, like in woodcutters, carpenters and joiners, generally because of the contact with sawdust (direct or airborne contact dermatitis).

Contact dermatitis because of the solid wood of finished articles is much less common. Even so, they have been described for the contact with musical instruments, bracelets, necklaces, and knife handles (2–5).

### Case Reports

6 female patients between 37 and 60-year-old developed acute eczema on the wrists after contact with similar wooden bracelets (Fig. 1).

1 of the patients applied Phenegan<sup>®</sup> cream on the lesions with aggravation and dissemination of the eczema to the sun exposed areas. Topical and systemic corticosteroids (in 2 patients) were prescribed with slow resolution of the dermatitis.

Patch tests with standard series of the Portuguese Contact Dermatitis Group, wood sawdust as is and, in 3 patients, with a plant series did not show any relevant positive reactions. Photo patch tests with UVA (5 J/cm<sup>2</sup>) showed strong positive reactions to the sawdust in all the patients (Fig. 2) (Table 1). We tested 8 controls and all had negative reactions to patch and photo patch tests.

These bracelets are widely sold in Portugal, mainly in Fátima sanctuary and imported from Brazil.

A Brazilian on-line store was found on the Internet, selling quite similar bracelets, where we got the informa-

tion that the wood was probably Red Louro (*Nectandra rubra*), of the Lauraceae family.

However, further investigation in the Tropical Scientific Research Institute in Lisbon could identify this timber as belonging to the *Brosimum* genus, probably *Brosimum rubescens* (Fig. 3a–c).

### Discussion

The genus *Brosimum* comprises 50 spp. and belongs to the Moraceae family (that includes about 1400 spp.).

The main ones are named as paucobra (*Brosimum guianense*) and paucorinha (*B. rubescens* and *Brosimum paraense*). These exotic woods are originally from South America, in special from Brazil, and are used for the production of small objects and handicrafts.

### Photoallergic contact dermatitis to brosimum wood

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**Key words:** brosimum wood; photoallergic contact dermatitis.

Tropical woods are mainly used in the manufacture of furniture, musical instruments and handicrafts, because



Fig. 2. Photo patch tests with sawdust.

Table 1. Patch and photo patch tests results

Patients	Patch tests			Photopatch tests	
	Standard Series	Plants series	Sawdust	Sawdust	Photoallergens series
1	—	NT	—	+++	NT
2	Ni, FM	NT	—	+++	NT
3	—	NT	—	+++	NT
4	—	—	—	++	Benzophenone-4
5	—	—	—	+++	—
6	—	—	—	+++	—

NT, non-tested; Ni, nickel sulfate; FM, fragrance mix.

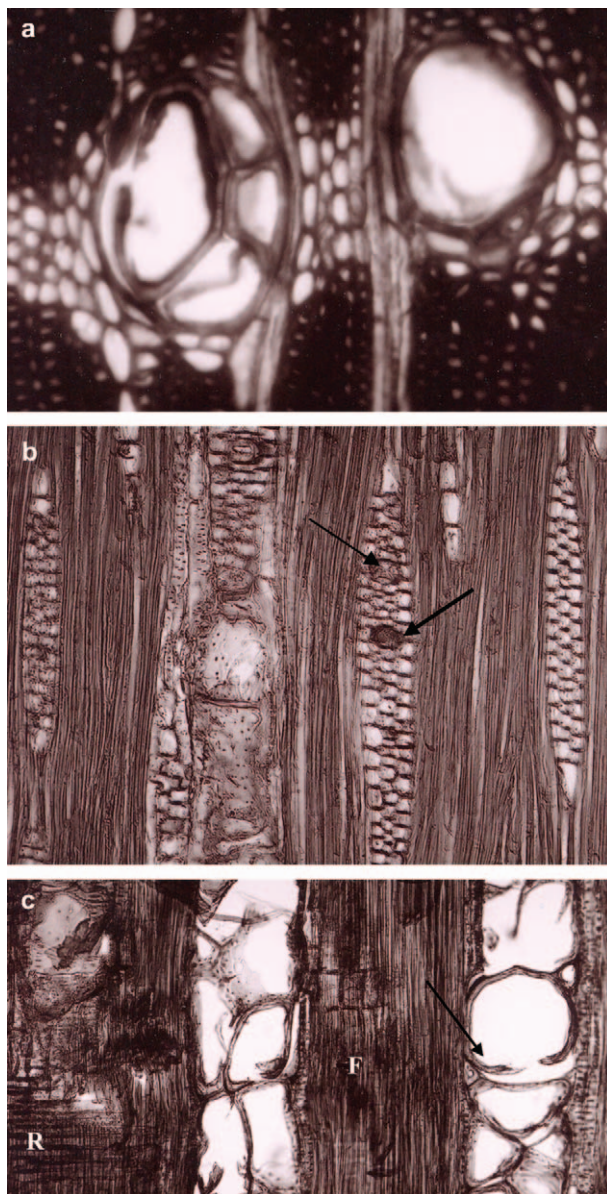


Fig. 3. **a)** Transverse section of wood sample. Diffuse-porous wood with vessels sometimes with sclerotic tyloses; heterogeneous rays; paratracheal unilateral axial parenchyma (P) or vasicentric sometimes aliform. **b)** Tangential section wood sample. Heterogeneous rays, uni and multiseriate with tanniferous tubes (arrows). **c)** Radial section of wood sample. Vascular elements with thin-walled and sclerotic tyloses (arrow); rays (R) heterogeneous, body ray cells procumbent with one or two rows of upright and/or square marginal cells; fibers (F).

Most of the highly sensitizing tropical woods do contain quinones as sensitizers. B. Hausen (1970) found evidence of quinones in *B. guianense* and *B. paraense* (6), and in *Brosimum alicastrum* the identified quinone was 2,6-dimetoxi-1,4-benzoquinone (7), but no cases of contact or photo contact allergy were reported.

In the *Brosimum gaudichaudii* wood, known in Brazil as 'mamica de cadela', bergapten, and others psoralens were found (8). These components are the main components of Viticromim<sup>®</sup>, which is used in Brazil for the treatment of vitiligo. These compounds are more probable to elicit phototoxic than photoallergic reactions, although photoallergic reactions have been reported rarely for psoralens (9, 10). Thus, quinones and psoralens are possible allergens or photoallergens in the wooden bracelets of these patients.

Wood contact dermatitis can be irritant, allergic, erythema multiform-like, phototoxic and photoallergic.

In the present cases, we point out the fact that, as far as we know, no cases of contact dermatitis provoked by *Brosimum* wood have been reported. Furthermore, we do emphasize the rarity of wood photoallergic contact reactions. Because of the fact that these bracelets are currently, widely used in our country, further cases are to be expected in the future.

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